

Hole's Essentials of Human Anatomy & Physiology
15th edition Welsh Test Bank

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Corret Answers are located at the end of each chapter.

TRUE/FALSE - Write 'T' if the statement is true and 'F' if the statement is false.

- 1) The structure of a body part is closely related to its function.
 - ☐ true
 - ☐ false

- 2) All forms of life use oxygen in respiration.
 - ☐ true
 - ☐ false

- 3) The integumentary system is superficial to the skeletal system.
 - ☐ true
 - ☐ false

- 4) All materials, including those of the human body, are composed of chemicals.
 - ☐ true
 - ☐ false

- 5) The traits that humans share with other organisms are called characteristics of life.
 - ☐ true
 - ☐ false

- 6) Heat is a form of energy.
 - ☐ true
 - ☐ false

- 7) Heat helps determine the rate of metabolic reactions.
 - ☐ true
 - ☐ false

- 8) Homeostatic mechanisms act through positive feedback.
- ☐ true
 - ☐ false
- 9) The diaphragm separates the thoracic and the abdominopelvic cavities.
- ☐ true
 - ☐ false
- 10) The human body can be divided into an axial portion and appendicular portion.
- ☐ true
 - ☐ false
- 11) The organ systems responsible for integration and coordination are the nervous and endocrine systems.
- ☐ true
 - ☐ false
- 12) Parietal membranes are attached to the surfaces of organs.
- ☐ true
 - ☐ false
- 13) The digestive system filters wastes from the blood and maintains fluid and electrolyte balance.
- ☐ true
 - ☐ false
- 14) The muscular system is responsible for body movements, maintenance of posture, and production of body heat.
- ☐ true
 - ☐ false

15) The ears are lateral to the eyes.

- ☐ true
- ☐ false

16) The elbow is distal to the wrist.

- ☐ true
- ☐ false

17) The absence of vital signs signifies death.

- ☐ true
- ☐ false

18) In properly describing a patient's wound, the terms "right" and "left" apply to the patient's right and left.

- ☐ true
- ☐ false

19) The mouth is distal to the nose.

- ☐ true
- ☐ false

20) Part of the liver may be found in the right lower quadrant.

- ☐ true
- ☐ false

21) Injuries and illnesses were factors that stimulated early interest in the structure and function of the human body.

- ☐ true
- ☐ false

MULTIPLE CHOICE - Choose the one alternative that best completes the statement or answers the question.

22) What investigator would conduct an experiment to determine how temperature changes affect the rate at which the heart beats?

- A) Anatomist
- B) Physiologist
- C) Chemist
- D) Biochemist

23) Blood plasma is an example of what type of fluid?

- A) Intracellular
- B) Extracellular
- C) Serous
- D) Acidic

24) Which of the following lists illustrates the idea of increasing levels of organization?

- A) Molecules, cells, tissues, organs, organ systems
- B) Tissues, cells, organs, molecules, organ systems
- C) Organs, molecules, organ systems, cells, tissues
- D) Cell, atom, tissue, molecule, macromolecule

25) In a crisis, the heart beats faster and more forcefully. What affect would this have on hydrostatic pressure?

- A) An increase in hydrostatic pressure
- B) A decrease in hydrostatic pressure
- C) No change in hydrostatic pressure

26) The temperature in a room drops to 65°F, causing the heater to turn on. The temperature change is an example of a(an):

- A) effector.
- B) receptor.
- C) stimulus.
- D) response.

- 27) Which of the following is considered one of the characteristics of life?
- A) Digestion
 - B) Respiration
 - C) Metabolism
 - D) Absorption
- 28) The ability of an organism to sense changes in its body is an example of:
- A) movement.
 - B) respiration.
 - C) responsiveness.
 - D) absorption.
- 29) What is the definition of metabolism?
- A) All the cells in the body
 - B) All of the homeostatic setpoints in the body
 - C) All of the chemical reactions in the body
 - D) All of the organs in the body and their parts
- 30) What is/are the origin(s) of many of the terms in anatomy and physiology?
- A) Greek and Latin
 - B) Spanish and Portuguese
 - C) French and German
 - D) Chinese and Japanese
- 31) At what level of organization is skin?
- A) Tissue level
 - B) Cellular level
 - C) Organ level
 - D) System level

- 32) Which of the following is NOT a requirement to maintain the life of humans?
- A) Water
 - B) Heat
 - C) Light
 - D) Pressure
- 33) What gas makes up approximately 1/5th of ordinary air and is used by cells to release energy from food substances?
- A) Oxygen
 - B) Carbon dioxide
 - C) Hydrogen
 - D) Nitrogen
- 34) Which of the following processes are NOT concerned with maintaining the life of an adult organism?
- A) Responsiveness
 - B) Movement
 - C) Reproduction
 - D) Metabolism
- 35) What is the definition of homeostasis?
- A) The changing external conditions
 - B) The maintenance of stable external conditions
 - C) The changing internal conditions
 - D) The maintenance of internal conditions
- 36) Which of the following examples illustrates a homeostatic mechanism?
- A) Shivering in response to a drop in body temperature
 - B) Increasing body temperature during exercise
 - C) Decreasing body temperature during prolonged exposure to cold conditions
 - D) Dehydration from lack of water intake

- 37) What requirement of life is also the most abundant chemical in the body and is the major component of extracellular fluid?
- A) Water
 - B) Oxygen
 - C) Cell
 - D) Food
- 38) What term refers to the structures that provide information about the conditions of the internal environment?
- A) Set points
 - B) Effectors
 - C) Receptors
 - D) Homeostasis
- 39) Which of the following directly cause(s) the changes in the internal environment needed to maintain homeostasis?
- A) Receptors
 - B) Effectors
 - C) Setpoint
 - D) Intracellular fluid
- 40) Which of the following causes conditions in the body to move away from the normal state?
- A) Negative feedback
 - B) Homeostasis
 - C) Positive feedback
 - D) Setpoint
- 41) Which of the following best describes a positive feedback mechanisms?
- A) They are the primary means of maintaining homeostasis.
 - B) They cause unstable conditions, at least temporarily.
 - C) They maintain the internal environment.
 - D) They move conditions toward a setpoint.

- 42) What cavities are included in the axial portion of the body?
- A) The cranial cavity only
 - B) The abdominopelvic and thoracic cavities only
 - C) The cranial cavity, vertebral canal, thoracic cavity, and abdominopelvic cavity
 - D) The thoracic cavity only
 - E) The abdominopelvic cavity only
- 43) What does the mediastinum separate?
- A) The thoracic cavity from the abdominal cavity
 - B) The thoracic cavity into right and left parts
 - C) The thoracic cavity from the pelvic cavity
 - D) The abdominal cavity into right and left parts
- 44) Name two types of cavities found in the head.
- A) Paranasal sinuses and nasal cavity
 - B) Oral cavity and mediastinum
 - C) Cranial cavity and vertebral canal
 - D) Middle ear cavities and pleural cavities
- 45) Which organ(s) is/are found in the pelvic cavity?
- A) Urinary bladder
 - B) Kidneys
 - C) Liver
 - D) Spleen
- 46) What is the name of the membrane on the surface of the lung?
- A) Visceral pleura
 - B) Parietal pleura
 - C) Visceral pericardium
 - D) Parietal pericardium

- 47) What term refers to a body part being above another body part?
- A) Posterior
 - B) Superior
 - C) Medial
 - D) Distal
- 48) What plane separates the body into left and right portions?
- A) Frontal plane
 - B) Transverse plane
 - C) Coronal plane
 - D) Sagittal plane
- 49) What is anatomical position?
- A) The body standing erect with the face forward
 - B) The body standing erect with face turned to the side
 - C) The body lying on the back with the face looking upward
 - D) The body standing erect with the upper limbs reaching out to the side
- 50) Observing how bones of the arm differ in shape from bones of the leg is an example of what field of study?
- A) Anatomy
 - B) Physiology
 - C) Cytology
 - D) Histology
- 51) Determining the effects of a hormone on digestive activity is an example of what field of study?
- A) Anatomy
 - B) Physiology
 - C) Cytology
 - D) Histology

- 52) Water, or H₂O, is an example of which level of organization?
- A) Atom
 - B) Molecule
 - C) Macromolecule
 - D) Cell
- 53) The stomach is an example of which organizational level?
- A) Molecule
 - B) Organ system
 - C) Tissue
 - D) Organ
- 54) The entire digestive tract is an example of which organizational level?
- A) Organelle
 - B) Tissue
 - C) Organ
 - D) Organ system
- 55) Which of the following has the highest organizational level of complexity?
- A) Respiratory system
 - B) Water
 - C) Heart
 - D) Epithelial tissue
- 56) Squinting and blinking the eyes in bright sunlight is an example of what characteristic of life?
- A) Responsiveness
 - B) Reproduction
 - C) Respiration
 - D) Absorption

- 57) Sweating caused by hot weather is an example of what characteristic of life?
- A) Respiration
 - B) Responsiveness
 - C) Absorption
 - D) Circulation
- 58) What organ system includes the kidneys?
- A) Respiratory system
 - B) Digestive system
 - C) Endocrine system
 - D) Urinary system
- 59) What life process is defined as the movement of substances through body fluids?
- A) Responsiveness
 - B) Absorption
 - C) Circulation
 - D) Assimilation
- 60) What life process is defined as the removal of wastes?
- A) Excretion
 - B) Absorption
 - C) Circulation
 - D) Movement
- 61) The passage of substances through membranes and into body fluids is an example of what life process?
- A) Excretion
 - B) Absorption
 - C) Circulation
 - D) Growth

- 62) Rob is camping out when a cold front brings in freezing temperatures. Rob begins to shiver. In this scenario, shivering is an example of what part of the homeostatic mechanism?
- A) Control system
 - B) Effector
 - C) Receptor
 - D) Stimulus
 - E) Response
- 63) What organ is found in the thoracic cavity?
- A) Brain
 - B) Lung
 - C) Liver
 - D) Spleen
- 64) What structure separates the thoracic cavity from the abdominopelvic cavity?
- A) Diaphragm
 - B) Liver
 - C) Mediastinum
 - D) Small intestine
- 65) Which membrane is associated with the surface of the heart?
- A) Parietal pleura
 - B) Visceral pericardium
 - C) Parietal pericardium
 - D) Visceral pleura
- 66) Which membrane is associated with the walls of the thoracic cavity?
- A) Parietal pleura
 - B) Visceral pleura
 - C) Parietal peritoneum
 - D) Visceral pericardium

- 67) When considering humans, what terms have the same meanings as the terms *anterior* and *posterior*?
- A) Superior and inferior
 - B) Superficial and deep
 - C) Ventral and dorsal
 - D) Medial and lateral
- 68) Which term best describes the directional relationship of the right eye and right lung?
- A) Ipsilateral
 - B) Bilateral
 - C) Contralateral
 - D) Proximal
- 69) What shape would a transverse section of a banana resemble?
- A) Circle
 - B) Triangle
 - C) Oval
 - D) Parabola
- 70) What region is superior and lateral to the umbilical region?
- A) Lumbar
 - B) Epigastric
 - C) Inguinal
 - D) Hypochondriac
- 71) What term refers to the region in front of the elbow?
- A) Brachial
 - B) Popliteal
 - C) Antecubital
 - D) Cubital

- 72) What abdominopelvic quadrant contains the spleen?
- A) Left upper quadrant
 - B) Left lower quadrant
 - C) Right upper quadrant
 - D) Right lower quadrant
- 73) What abdominopelvic quadrant contains the appendix?
- A) Left upper quadrant
 - B) Left lower quadrant
 - C) Right upper quadrant
 - D) Right lower quadrant
- 74) What abdominopelvic quadrant contains the gallbladder?
- A) Left upper quadrant
 - B) Left lower quadrant
 - C) Right upper quadrant
 - D) Right lower quadrant
- 75) The urinary bladder is located in which abdominopelvic region?
- A) Umbilical region
 - B) Pubic region
 - C) Left inguinal region
 - D) Right hypochondriac region
- 76) What organ is part of the lymphatic system?
- A) Spleen
 - B) Liver
 - C) Brain
 - D) Thyroid gland

- 77) The pancreas releases hormones. It also releases enzymes needed to break down food. Because of this dual role, the pancreas could be considered part of what two organ systems?
- A) Nervous and digestive systems
 - B) Cardiovascular and lymphatic systems
 - C) Endocrine and digestive systems
 - D) Urinary and endocrine systems
- 78) What plane would be required for an MRI of the head to show both eyes and the nose within the same image?
- A) Coronal
 - B) Sagittal
 - C) Transverse
 - D) Median
- 79) Bell's palsy results in the lack of stimulation to facial muscles, so they do not contract. Bell's palsy is associated with what organ system?
- A) Nervous system
 - B) Endocrine system
 - C) Skeletal system
 - D) Integumentary system
- 80) Where is the femoral region in relationship to the popliteal region?
- A) Distal
 - B) Medial
 - C) Proximal
 - D) Lateral
- 81) Which is a physiological description rather than an anatomical one?
- A) The heart muscle is involuntary and fatigue-resistant.
 - B) The skin is composed of an epithelial layer over a connective tissue layer.
 - C) The quadriceps femoris and hamstring muscles are located in the thigh.
 - D) The aorta is a large vessel connected to the heart.

FILL IN THE BLANK. Write the word or phrase that best completes each statement or answers the question.

- 82) The anatomical term for the forearm is_____.
- 83) The method for testing a hypothesis, then rejecting or accepting it based on the results of experiments or observations, is called the_____.
- 84) The branch of science that deals with the structure of human body parts is called_____.
- 85) The branch of science that deals with the function of human body parts is called_____.
- 86) The topics of human anatomy and physiology are difficult to separate because the structures of the body parts are closely related to their_____.
- 87) The sum total of all of the chemical reactions in the body that break substances down and build them up is called_____.
- 88) The life process that is described as obtaining oxygen, using oxygen to release energy from foods, and removing gaseous wastes is called_____.
- 89) The most abundant chemical substance in the body is_____.
- 90) The weight of the air produces a force called atmospheric_____.
- 91) To separate the thoracic cavity from the abdominal cavity, a cut along the_____ plane would be used.
- 92) Heat is a form of_____.

- 93) Maintenance of a stable internal environment is called_____.
- 94) Homeostatic mechanisms act through_____ feedback.
- 95) The gas that makes up one-fifth of the air around us is_____.
- 96) The force on the outside of the body due to the weight of air above it is called atmospheric_____.
- 97) Specific conditions (stimuli) in the internal environment are sensed by_____.
- 98) Responses that alter conditions in the internal environment are caused by_____.
- 99) The heart, esophagus, trachea, and thymus are located within the_____.
- 100) The teeth and tongue are located in the_____ cavity.
- 101) The specific cavity that contains the terminal portion of the large intestine, the urinary bladder, and the internal reproductive organs is the_____ cavity.
- 102) A particular hormone affects only a particular group of cells, called its_____ cells.

Answer Key

Test name: CH-01

- 1) TRUE
- 2) FALSE
- 3) TRUE
- 4) TRUE
- 5) TRUE
- 6) TRUE
- 7) TRUE
- 8) FALSE
- 9) TRUE
- 10) TRUE
- 11) TRUE
- 12) FALSE
- 13) FALSE
- 14) TRUE
- 15) TRUE
- 16) FALSE
- 17) TRUE
- 18) TRUE
- 19) FALSE
- 20) FALSE
- 21) TRUE
- 22) B
- 23) B
- 24) A
- 25) A
- 26) C
- 27) C
- 28) C
- 29) C
- 30) A
- 31) C
- 32) C
- 33) A
- 34) C
- 35) D
- 36) A
- 37) A

- 38) C
- 39) B
- 40) C
- 41) B
- 42) C
- 43) B
- 44) A
- 45) A
- 46) A
- 47) B
- 48) D
- 49) A
- 50) A
- 51) B
- 52) B
- 53) D
- 54) D
- 55) A
- 56) A
- 57) B
- 58) D
- 59) C
- 60) A
- 61) B
- 62) E
- 63) B
- 64) A
- 65) B
- 66) A
- 67) C
- 68) A
- 69) A
- 70) D
- 71) C
- 72) A
- 73) D
- 74) C
- 75) B
- 76) A
- 77) C

- 78) A
- 79) A
- 80) C
- 81) A
- 82) antebrachial
- 83) scientific method
- 84) anatomy
- 85) physiology
- 86) functions
- 87) metabolism
- 88) respiration
- 89) water
- 90) pressure
- 91) transverse
- 92) energy
- 93) homeostasis
- 94) negative
- 95) oxygen
- 96) pressure
- 97) receptors
- 98) effectors
- 99) mediastinum
- 100) oral
- 101) pelvic
- 102) target